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(54) **APPARATUS, SYSTEMS AND METHODS FOR AN INFUSION PUMP ASSEMBLY**

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(57) **ABSTRACT**

A system for delivery of a volume of infusible fluid. The system includes a controller configured to calculate a trajectory for delivering infusible fluid, the trajectory comprising at least one volume of fluid, and determine a schedule for delivering the at least one volume of fluid according to the trajectory, wherein the schedule comprising an interval and a volume of infusible fluid for delivery. The system also includes a volume sensor assembly for determining the at least one volume of fluid delivered, wherein the controller recalculates the trajectory based on the volume of fluid delivered.

